

48. (As Filed) The system recited in claim 46 wherein the first and second sets of identification data comprise image data.

REMARKS

In the Office Action mailed September 11, 2002 (paper no. 7), objections were drawn to paragraph [38] of the specification and to Claims 3 and 40, and all of the claims were rejected under 35 U.S.C. §103(a) over at least U.S. Pat. No. 6,1445,738 ("Stinson") in view of U.S. Pat. No. 6,341,169 ("Cadorette"); in the case of certain dependent claims, additional references were also cited. Amendments have been made to address the objections. The claim rejections are traversed in part and overcome in part. An appendix is provided in which the amendments to the specification and claims are highlighted by underlining added material and enclosing deleted material in square brackets.

1. Specification

The language objected to in the specification was intended to indicate that alternatives and equivalents to the embodiment shown in the right portion of Fig. 2 were within the scope of the invention, just as is the case with the left portion of Fig. 2. The language has been amended to make this more clear.

2. Claim Objections

Claims 3 and 40 have been amended as requested in the Office Action.

3. Claim Rejections

All of the claim rejections rely on a combination of at least Stinson and Cadorette. For convenience, the following remarks focus on independent Claim 1, although they are believed also to be applicable to the other independent claims, i.e. Claims 23, 32, 40, and 46. A common aspect of the independent claims is a comparison between biometric data extracted directly from a customer and extracted from a verification instrument. The independent claims have been amended to recite that such a comparison is performed automatically; support for such a limitation appears in the specification at, for example, p. 7, ll. 6 – 7. As part of these amendments, the limitations of Claim 41 have been incorporated into Claim 40 so that Claim 41 has been canceled, and the claim dependence that appears in Claims 42 and 43 has been corrected in accordance with this change.

Stinson discloses an automated check-cashing machine (Stinson, Col. 1, l. 43) that confirms the identity of a customer by extracting biometric information at the time of the transaction and comparing the extracted biometric information with stored biometric information (*id.*, Col. 2, ll. 5 – 16). With respect to Claim 1, Stinson has been cited as disclosing “extracting a second set of biometric data directly from at least one feature of the customer” (Office Action, p. 3).

The Office Action indicates that the remaining elements of Claim 1 are disclosed in Cadorette, which discloses a system for validating identification credentials, including verifying the identities of those who present the identification credentials (Cadorette, Col. 4, ll. 16 – 24). In marked contrast to the invention embodied by the pending claims, Cadorette specifically rejects the idea that the identification credentials can themselves be used to verify identity automatically:

The system operates under the premise that the only truly valid age and biometric data are that on file with the credential issuing agency, *not that embodied in the physical credential*. The system employs hardware and software means for converting the data on file with a multitude of credential issuing agencies into forms suitable for use as reference for the automatic comparison functions implemented by the system. (*Id.*, Col. 6, ll. 9 – 16, emphasis added).

In accordance with this underlying premise, Cadorette discloses a system in which automatic identity verification functions are performed by comparing direct images of the person presenting the credentials with images stored by *an issuer* of the credentials:¹

The system attempts to verify that the captured image of the subject matches the *reference image* of the individual identified by the credential. The verification reference record contains data extracted from the image of the credential owner *on file with the credential issuer*.

(*Id.*, Col. 13, ll. 7 – 12, emphasis added).

Thus, Cadorette fails to disclose automatically comparing a first set of biometric data extracted from a verification instrument with a second set of biometric data extracted directly from a feature of the customer. Such a limitation is set forth in independent Claim 1 and the other independent claims include corresponding limitations that are not disclosed in Cadorette.

Applicants further note that although the Office Action has cited language in Cadorette that appears to describe comparing an image from a credential with an image of a subject, such a description is made purely in the context of a *manual* verification that is used if the preferred automatic verification fails:

The system can implement any manual verification procedure which processes credential and subject images in ways to enhance evaluation operations. The system may prompt the operator to select the photo from the credential image and then enlarge the photo to optimal size rendering the photo image side-by-side with the captured subject image on the graphics display.

(*Id.*, Col. 15, ll. 41 – 47).

Analysis may be aided with an optical-face-recognition algorithm, but the comparison is performed manually with “[t]he system prompt[ing] the *operator* to declare the displayed images as matching or not” (*id.*, Col. 15, ll. 54 – 55, emphasis added).

To summarize, the pending claims should thus be allowed for at least the following reasons: (1) the combination of Stinson and Cadorette fails to disclose

¹ It is worth emphasizing that the teachings of Cadorette distinguish between “validation” of credentials, which confirms the documentary authenticity of the credentials by comparing its image with standardized

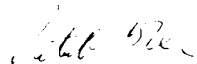
automatic comparison of image or biometric data from a verification instrument and directly from a feature of a customer; and (2) Cadorette specifically teaches away from such a limitation by criticizing the use of information extracted directly from a physical credential.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,


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credential images (*id.*, Col. 12, ll. 20 – 25) and “verification” of credentials, which confirms the identity of the person presenting the credentials. *See id.*, Col. 6, ll. 55 – 59.

APPENDIX: VERSION WITH MARKINGS TO SHOW CHANGES MADE

The amendments made by the foregoing Amendment are highlighted below by enclosing deleted material in square brackets and underlining added material.

1. Specification

Paragraph [38] of the specification has been amended as follows:

[38] As was the case for the left side of Fig. 2A, there are a number of alternative and equivalent embodiments that fall within the scope of the invention. For example, at blocks 244 and 248, biometric data may be substituted with image data that is extracted and compared with stored data. The comparison at block 252 may be performed automatically by the system, with either the biometric or image data, or may be performed by a human operator who is presented with image representations of the data, such as on a monitor at the central station 110. In other alternative embodiments, intervention of a human operator may instead be possible if the comparison is performed automatically at block 252, but found to be unacceptable, with the human operator comparing the new biometric or image data with the stored biometric or image data to account for changes that may be the result of aging, weight change, or other physical change. In a particular embodiment, this feedback information may then be fed to a neural network as described above, or other trained evaluation system, so that it may self-adapt and correct its behavior.

2. Claims

Claim 41 has been canceled and Claims 1, 3, 23, 32, 40, 42, 43, and 46 have been amended as follows:

1. (Amended) A method for authorizing a customer to perform transactions with a self-service device, the method comprising:
extracting a first set of biometric data regarding the customer from a verification instrument;
extracting a second set of biometric data directly from at least one feature of the customer;
extracting textual data regarding the customer from the verification instrument;
automatically comparing the first and second sets of biometric data to determine whether the first and second sets of biometric data are derived from a single individual; and
recording customer identification information if it is determined that the first and second sets of biometric data are derived from the customer.

2. (As Filed) The method recited in claim 1 wherein the customer identification information comprises information derived from the extracted textual data.

3. (Amended) The method recited in claim 1 wherein the customer identification information comprises a name of the customer.

4. (As Filed) The method recited in claim 3 wherein the transactions comprise providing funds in exchange for a financial instrument identifying the name of the customer.

5. (As Filed) The method recited in claim 4 wherein the financial instrument is selected from the group consisting of a note, a draft, a check, and a promissory note.

6. (As Filed) The method recited in claim 1 wherein the transactions comprise a financial transaction.

7. (As Filed) The method recited in claim 1 wherein the transactions comprise a nonfinancial transaction.

8. (As Filed) The method recited in claim 1 wherein the customer identification information comprises a signature of the customer.

9. (As Filed) The method recited in claim 1 wherein the customer identification information is further derived from one of the first and second sets of biometric data.

10. (As Filed) The method recited in claim 1 wherein the first set of biometric data is derived from image data on the verification instrument.

11. (As Filed) The method recited in claim 1 wherein the first set of biometric data is derived from data encoded magnetically on the verification instrument.

12. (As Filed) The method recited in claim 1 wherein the first set of biometric data is derived from data encoded optically on the verification instrument.

13. (As Filed) The method recited in claim 1 wherein the first and second sets of biometric data are derived from facial features.

14. (As Filed) The method recited in claim 1 wherein the first and second sets of biometric data are derived from fingerprints.

15. (As Filed) The method recited in claim 1 wherein the first and second sets of biometric data are derived from voice features.

16. (As Filed) The method recited in claim 1 wherein the textual data are derived from data encoded magnetically on the verification instrument.

17. (As Filed) The method recited in claim 1 wherein the textual data are derived from data encoded optically on the verification instrument.

18. (As Filed) The method recited in claim 1 wherein extracting textual data regarding the customer from the verification instrument comprises:

extracting a database reference number from the verification instrument;

and

retrieving the textual data regarding the customer from a database with the database reference number.

19. (As Filed) The method recited in claim 18 further comprising prompting the customer to enter data for comparison with the retrieved textual data.

20. (As Filed) The method recited in claim 1 wherein the self-service device comprises a self-service kiosk.

21. (As Filed) The method recited in claim 1 wherein the self-service device comprises a personal computer.

22. (As Filed) The method recited in claim 1 wherein the self-service device comprises a personal digital assistant.

23. (Amended) A method for authorizing a customer to perform transactions with a self-service device, the method comprising:

- extracting a first set of image data regarding the customer from a verification instrument;
- extracting a second set of image data directly from at least one feature of the customer;
- extracting textual data regarding the customer from the verification instrument;
- automatically comparing the first and second sets of image data to determine whether the first and second sets of image data are derived from a single individual; and
- recording customer identification information if it is determined that the first and second sets of image data are derived from the customer.

24. (As Filed) The method recited in claim 23 wherein the customer identification information comprises information derived from the extracted textual data.

25. (As Filed) The method recited in claim 23 wherein comparing the first and second sets of image data comprises having a human examine the first and second sets of image data.

26. (As Filed) The method recited in claim 23 wherein the customer identification information is further derived from one of the first and second sets of image data.

27. (As Filed) The method recited in claim 23 wherein the textual data are derived from data encoded magnetically on the verification instrument.

28. (As Filed) The method recited in claim 23 wherein the textual data are derived from data encoded optically on the verification instrument.

29. (As Filed) The method recited in claim 23 wherein the transactions comprise a financial transaction.

30. (As Filed) The method recited in claim 23 wherein the transactions comprise a nonfinancial transaction.

31. (As Filed) The method recited in claim 23 wherein extracting textual data regarding the customer from the verification instrument comprises:

extracting a database reference number from the verification instrument;

and

retrieving the textual data regarding the customer from a database with the database reference number.

32. (Amended) A method for executing a transaction with a customer, the method comprising:

extracting a first set of biometric data directly from at least one feature of the customer;

comparing the first set of biometric data with a stored set of biometric data, wherein the stored set of biometric data has previously been authenticated by automatic comparison between a set of biometric data extracted from a verification instrument and a second set of biometric data extracted directly from at least one feature of the customer; and

thereafter, completing the transaction if it is determined that the first and stored sets of biometric data are derived from the customer.

33. (As Filed) The method recited in claim 32 wherein the transaction comprises a financial transaction.

34. (As Filed) The method recited in claim 33 further comprising:
extracting textual data from a financial instrument presented by the customer as part of the financial transaction; and
comparing the textual data with stored textual data, wherein the stored textual data was extracted from the verification instrument.

35. (As Filed) The method recited in claim 34 wherein the textual data comprises a signature of the customer.

36. (As Filed) The method recited in claim 34 wherein the textual data comprises a name of the customer.

37. (As Filed) The method recited in claim 32 wherein the set of biometric data extracted from the verification instrument is derived from image data on the verification instrument.

38. (As Filed) The method recited in claim 32 wherein the set of biometric data extracted from the verification instrument is derived from data encoded magnetically on the verification instrument.

39. (As Filed) The method recited in claim 32 wherein the set of biometric data extracted from the verification instrument is derived from data encoded optically on the verification instrument.

40. (Amended) A self-service transaction system comprising:

a plurality of networked self-service devices, at least one of the self-service devices including:

a first identification device adapted to extract a first set of identification data directly from a customer; and

a second identification device adapted to extract a second set of identification data and textual data regarding the customer from a verification instrument;

[and]

a storage device in communication with the at least one of the self-service devices for storing customer identification information derived from the textual data; and

a comparator in communication with the at least one of the self-service devices, the comparator being configured to automatically compare the first and second sets of identification data to determine whether the first and second sets of identification data are derived from a single individual.

41. (Canceled).

42. (Amended) The system recited in claim **[41]** 40 wherein the comparator is local to the at least one of the self-service devices.

43. (Amended) The system recited in claim **[41]** 40 wherein the comparator is networked with the plurality of self-service devices.

44. (As Filed) The system recited in claim 40 wherein the first and second sets of identification data comprise biometric data.

45. (As Filed) The system recited in claim 40 wherein the first and second sets of identification data comprise image data.

46. (Amended) A self-service transaction system comprising:

a plurality of networked self-service devices, at least one of the self-service devices including:

means for extracting a first set of identification data directly from a customer; and

means for extracting a second set of identification data and textual data regarding the customer from a verification instrument;

means for automatically comparing the first and second sets of identification data to determine whether the first and second sets of identification data are derived from a single individual; and

means for recording customer identification information derived from the textual data.

47. (As Filed) The system recited in claim 46 wherein the first and second sets of identification data comprise biometric data.

48. (As Filed) The system recited in claim 46 wherein the first and second sets of identification data comprise image data.